

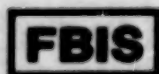
JPRS 74203

19 September 1979

# Worldwide Report

TELECOMMUNICATIONS POLICY,  
RESEARCH AND DEVELOPMENT

No. 90



FOREIGN BROADCAST INFORMATION SERVICE

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19 September 1979

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**TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT**

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VENEZUELA: PREPARATIONS FOR GENEVA RADIO CONFERENCE CRITICIZED

Caracas Radio Rumbos Network in Spanish 1530 GMT 6 Sep 79 PA

[Venezuela Chamber of Radio Broadcasting Industry program]

[Text] Called "CAMR-79" and sponsored by the International Telecommunications Union [ITU], a specialized organ of the United Nations, the 1979 World Administrative Communications Conference will open in Geneva 24 September.

For this important meeting, the communications office has announced that it has prepared Venezuela's proposal and, as a logical consequence, the communications policy it feels the nation needs. It says it has decided to use this conference as a point of departure to meet its own goals.

In this regard, our official [words indistinct] state some views regarding the event by saying that its importance can be estimated from the position stated at the U.S. Senate Foreign Relations Committee. The report there, which states that CAMR-79 will be a fundamental factor influencing the peoples' lifestyles, both personally and in international relations, for the next two generations.

As a consequence of this statement, if one considers that such advanced countries as the United States have been preparing their proposals since 1974 in seminars, conferences and consultations involving more than 3,000 persons, we can only regret that the Venezuelan proposal was drafted only 2 months ago and without the private sector having been properly consulted.

Venezuela must not lose sight of its leading role and, as a consequence, it must do everything it can to lead the Latin American nations at the conference, especially since some people expect a north-south confrontation and say the less-developed nations must be well prepared to defend their rights and thus satisfy their domestic communications needs.

If the debates are likely to result in political, ideological, social or sovereignty issues, Venezuela must not forget that the majority of the member nations of the ITU are European and African and that the latter always

follow the former, which are very advanced countries with radio broadcasting that is totally state-owned and where commercial radio is almost totally unknown.

We must realize that our greater areas of influence are in the Organization of American States and in the Inter-American Radio Broadcasting Association. Therefore Venezuela is in a different orbit than the nations [words indistinct].

As far as the technical problem, we will for now limit the issue to textually quoting what was said at a preparatory meeting by Minister Sumo of Sudan: You, the industrialized countries, have 10 percent of the population and 90 percent of the frequencies. We have 90 percent of the population and 10 percent of the frequencies. We want the portion to which we have a right.

Women should play an active role in making economic, social and political decisions of the nation.

CSO: 5500



# REPORT EXPECTED TO RECOMMEND DOMESTIC SATELLITE SYSTEM

Sydney THE SYDNEY MORNING HERALD in English 21 Jul 79 p 10

[Article by Richard Macey in Canberra]

[Text]

IN AUGUST, 1977, the Packer organisation put a proposal before the Federal Government calling for the setting up of a domestic communications satellite system for Australia.

After two months of consideration the then Minister for Post and Telecommunications, Mr Robinson, announced that a special task force had been set up to investigate the need for such a system.

The task force, headed by the former general manager of the Overseas Telecommunications Commission (Australia), Mr Harold White, completed its research in July last year.

Its report, which recommended that Australia should indeed proceed to establish its own communications satellite system "as early as practicable," was tabled in Federal Parliament by the new Minister for Post and Telecommunications, Mr Staley, on September 27.

The project, to cost about \$190 million, would be controlled by a government commission.

The Federal Government then set up a working group with representatives of govern-



ment departments to review the task force findings and make them available for public discussion.

The working group, led by Mr Alan Guster of the Department of Post and Telecommunications, finished its investigations earlier this month and is expected to report to Mr Staley within the next two weeks.

It is believed that the working group's report will include a recommendation that Australia goes ahead with plans to buy a satellite system for almost \$190 million.

A government decision is expected before the end of the year.

The multi-purpose satellites would be used mostly to carry some of the ever-increasing

volume of communications between the capital cities.

The working group appears to have been convinced that the demand for communications is growing so rapidly in Australia that the use of satellites would not make any terrestrial system, such as the cables and microwave circuits, redundant.

Nor would satellites reduce Telecom's plans for future extensions of the terrestrial network.

The satellites would also be able to broadcast radio, television and telephone services to outback and remote areas.

There are about 40,000 people in Australia who live in such remote places that they have no telephones, except for radio-telephones, and no television.

About half the 40,000 live in very small towns and mining centres. The rest live in isolated homesteads.

People wanting to receive radio, television and telephone calls in the outback, through the satellites would have to use small dish-shaped antennas called earth stations.

Small earth stations just 1.2 metres in diameter and capable of receiving television directly from the satellites are expected to be on the market for about \$500 by the early 1980s.

People living in remote stations or in tiny outback townships would buy and erect their own earth station just as people in the city put television aerials on the roofs of their homes.

However, those wanting to have a telephone in addition to radio and television would have to use a far more complicated earth station.

Government sources believe an antenna capable of handling two-way telephone calls would still cost up to \$10,000 in the mid-1980s.

At \$10,000 a unit such equipment would be far too expensive for every outback user to buy his own.

In small towns, the community could share a unit but on outback stations users would have to either pay off the

equipment over its life or the cost would be subsidised.

In a move to cut costs, the working group is believed to have decided that Australia should buy three low-powered satellites.

The satellites would probably operate on a power of 20-watts, about a fifth of the power used by more conventional communications spacecraft. Two of the satellites would be launched into orbit while the third would remain on Earth as a spare.

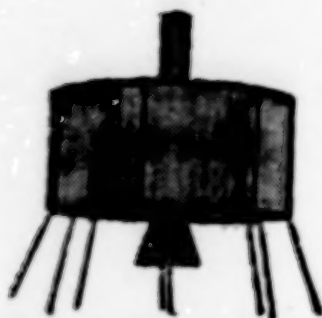
According to one Government official, reducing the spacecraft's power would also reduce the quality of television reception in the home.

"But the quality reduction would be so slight as to be undetectable to the bulk of people," he added.

Another factor in deciding whether satellites would be economical for Australia has been the length of the working life of the spacecraft.

When the task force report recommended that Australia should buy satellites it was thought the life span of the equipment would only be about seven or eight years. The working group is believed to have decided that 10 years is now quite realistic.

Much of the original opposition to the use of



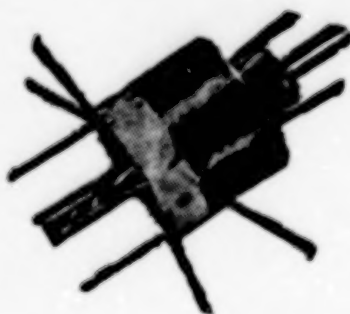
satellites appears to have faded.

It is believed that of about 170 public submissions put to the working group "only one or two" were solidly against satellites.

The unions have consistently failed to back up with evidence their allegations that the use of satellites would cut into jobs.

Opposition from the independent and rural television stations has been based on the fear that changes to the broadcasting laws to permit one city-based station to transmit programs to the country would undermine their viability.

However, it now seems likely that any plan accepted by the Government for a satellite system would include some protection for the rural television stations.



## AUSTRALIA

### VULNERABILITY OF WEST AUSTRALIA'S COMMUNICATIONS NOTED

Perth THE WEST AUSTRALIAN in English 17 Jul 79 p 5

[Article by Andre Malan]

[Text] Many millions of dollars would be needed to overcome WA's vulnerable communications position.

The extent of this vulnerability was exposed last week when a generator fault at Kalgoorlie came close to isolating WA from the rest of the world.

If technicians in Kalgoorlie had not reacted and repaired the fault at the last minute, communications to and from WA would have been restricted to a handful of circuits on the open line alongside the interstate railway line.

The only other interstate communications operating would have been the independent networks operated by the police, and the defence and transport departments.

A senior Telecom spokesman admitted yesterday that the organisation was in an extremely vulnerable situation, particularly during an industrial dispute.

He said that Telecom was geared to repair any breakdown in interstate communications quickly in normal conditions, but little could be done during a strike.

He said that four options were available to Telecom to reduce dependence on the east-west microwave link. These were:

- A coaxial cable parallel to the microwave link. This would mean joining the cables that at present end in Ceduna and Northam.

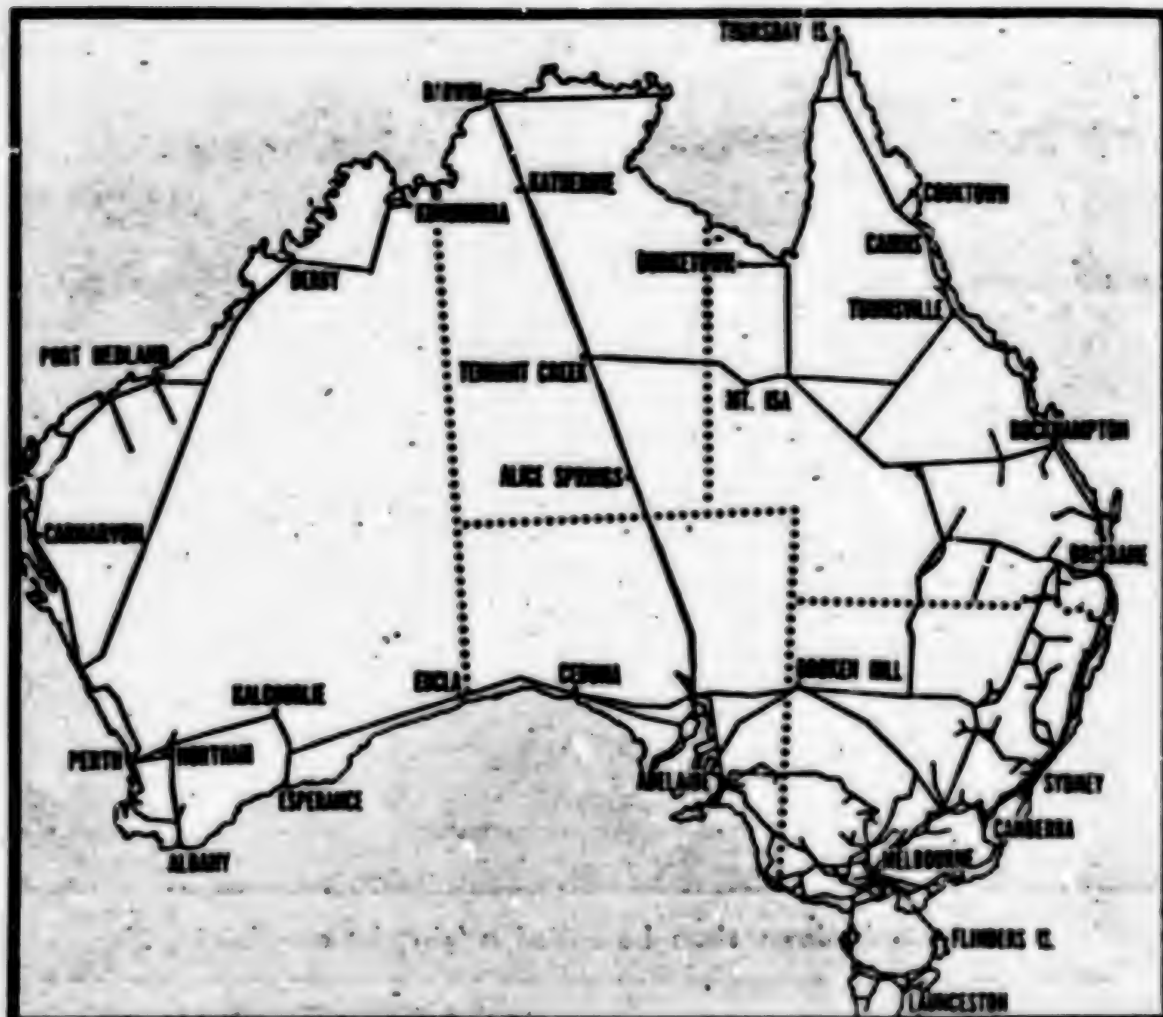
- A submarine cable between Albany and Adelaide.

- Completion of the round-Australia broadband link which would require a new link between the coaxial cable that ends in Port Hedland and the microwave service to Darwin.

- A domestic communications satellite.

The spokesman said that all of these proposals would be costly and there was nothing to indicate that any of them were likely to be approved in the short term.

The proposal he most favoured was extending the Perth-Port Hedland coaxial cable through the Kimberleys to Darwin. This would provide the bonus of improved telecommunications services in the North-West.



This map shows Australia's telecommunications links. Most services between WA and the Eastern States are carried on the east-west microwave link and a break in this link west of Ceduna could isolate WA. One proposal to overcome this is to join the Perth-Port Hedland coaxial cable to the microwave link in Darwin. The present service north of Port Hedland is carried on "open lines".

SCIENTISTS WORK ON SECOND STAGE OF NEW RADAR SYSTEM

Sydney THE SYDNEY MORNING HERALD in English 23 Jul 79 p 2

[Text]

From PAUL ELLERCAMP

CANBERRA. — Defence scientists have begun work on the \$25 million second stage of a revolutionary new radar system which can detect aircraft and ships thousands of kilometres away.

In experiments from bases near Alice Springs, they have already succeeded in tracking commercial aircraft coming to Australia from Singapore.

Once it is complete, the new system, known as Hindalee, could be used to detect drug smugglers in both aircraft and ships, as well as cyclones, wave heights, and wind strength.

The system is revolutionary because it gives a detecting range thousands of kilometres greater than that of conventional, microwave radar.

It operates with frequency

modulation radio waves being bounced off the ionosphere, then being reflected back to a separate receiver station.

Because it comes from above, no moving aircraft can escape it by flying beneath it.

After initial research, the Labor Government approved a four-year development program costing \$3.4 million from two bases near Alice Springs, at Harts Range, and Mt Everard.

The results so far, according to defence officials, have been excellent, although until now they have only been able to direct the signal along a single track.

Stage B, over the next 18 months — preparations for which are now under way at the two bases — will involve the signal being switched through an arc, to cover a much wider area.



# SATELLITE TV TRANSMISSION FEATURED AT SYDNEY MEETING

Canberra THE AUSTRALIAN in English 16 Jul 79 p 12

[Text]

AN experimental low-cost satellite broadcasting system which enables individuals or small communities in remote out-back areas without reception facilities to view Australian TV programmes live, will highlight the IREECON International Exhibition in Sydney next month.

This results from a joint project of the Australian and Canadian Governments.

The system is part of a major display by the Postal and Telecommunications Department, which will also feature a Telidon System demonstration, and a possible display of remote area TV programming which utilises a small five metre local Earth station.

The IREECON International Convention is a biennial event arranged by the Institution of Radio and Electronics Engineers of Australia. It will be staged at the University of NSW from August 27-31.

The 17th such presentation comprises a major convention at which more than 170 papers will be delivered by lead-

ing international and Australian experts, and an exhibition of the latest in communication and sound equipment and systems, by 70 exhibitors. Exhibits will cover an area of more than 2,700 square metres.

In the Postal and Telecommunications Out-back Television demonstration, a small TV receiving terminal (1.2m antenna) will show IREECON delegates and visitors direct reception of programmes from Canada via the Canadian CTS-1 (Hermes) satellite.

The department's display of the Telidon System will show the capabilities of the new Canadian Teletext system which employs an additional signal to an existing transmitted TV program. By using appropriate decoding equipment, this additional signal can be viewed in place of the normal program.

The signal consists of static "pages" of written and graphic information presented on the receiver screen which can be selected as required. Teletext information can cover news, sports and stock exchange results, weather maps, etc., and is updated as necessary.

This Canadian system

is similar to a number of systems being proposed for Australia, including the U.K. Teletext.

The third element in the department's exhibit deals with the Remote Area Television Programme for extending national TV service coverage. The program will provide 56 further low power TV transmitters in remote areas which do not at present have satisfactory reception.

Many of these new transmitters will receive the program from the existing INTELSAT IV satellite using leased channels above the Pacific Ocean, via a small five-metre Earth Station antenna.

IREECON organisers expect the keynote convention address by distinguished U.S. telecommunications expert, Donald Bond, will generate exceptional interest.

Mr Bond wrote the 1977 report, "The opportunity for television Program Distribution in Australia using Earth Satellites", which was a major stimulus in establishment of the Australian Government's Task Force, National Communications Satellite System.

Now retired, Mr Bond, 69, is listed in the Ameri-

can Men of Science, and is the author of many published papers. He was formerly with the Radio Corporation of America (RCA) and the David Sarnoff Centre in Princeton, New Jersey.

During a long career, Mr Bond was involved in the U.S. corporate-wide planning studies of satellite and telecommunications systems for business and military applications, and also spent three years (1958-61) in the office of the U.S. Secretary of Defence.

Other papers cover a wide range of diverse topics, including: microprocessors, measurements, electronic music/audio, broadcasting, telecommunications, fibre optics and medical electronics.

In the medical category will be a paper dealing with a non-invasive microwave monitor for studying breathing and other bodily functions. This will be given by Dr. D.W. Griffin, Reader in Electrical Engineering at the University of Adelaide.

Noteworthy among special-interest papers for music/audio professionals is a study by two American experts of problems with 380-degree concert halls. The paper was prepared by Professor J.R. Ashley and Mr J.C. Cox, of the Electrical and Computer Engineering Department, University of Colorado, U.S.A.

Other speakers taking part in the convention come from the U.S.A., U.K., Scotland, Canada, New Zealand, India, France and West Germany, as well as from several Australian universities, scientific institutions, and private enterprise organisations.

A special service feature for IREECON delegates will be the provision of a computer terminal and operator for their use during the exhibition/convention.

The service, which employs an HP 250 small business system, is being supplied by one of the exhibitors, Hewlett Packard.

COMPUTERIZED EXCHANGE: NORWAY'S GIFT

Madras THE HINDU in English 15 Aug 79 p 11

[Text] New Delhi, Aug. 14. The Government of Norway is giving to India a new 250-line stored programme (computer) electronic exchange valued at Rs. 14 lakhs. The exchange will be commissioned at Kosi Kalan, Uttar Pradesh, on August 15. The gift is meant to assist India in its efforts to extend telephone facilities to rural areas.

The visiting Norwegian Minister for Communications, Mr. A. Jordahl, will formally hand over the keys of the exchange to Mr. Narsingh, Minister of State for Communications, who will make the inaugural call to Mr. Rewati Raman Singh, U.P. Power Minister from Kosi Kalan. Mr. Jordahl will make an STD call to Delhi and speak to Mr. Zulfiquarullah, Communications Minister.

Mr. Jordahl on Monday called on Mr. Mohammed Shafi Quereshi, Minister for Tourism and Civil Aviation and discussed problems relating to operation of air services between Norway and India.

Kosi Kalan is a typical mandi town about 100 miles from Delhi. The exchange will help India familiarise itself with the working of small electronic exchanges in rural and semi-urban areas with extremes of temperature and humidity and unstable power supply.

It is capable of handling domestic and international telephone traffic and is installed in a transportable container.

The setting up of the exchange will make possible calls to Delhi and other cities like Bombay, Calcutta, Bangalore and Hyderabad through the Delhi automatic exchange.

CSO: 5500

JAPAN

OPTICAL COMMUNICATION SYSTEM TESTED BY JAPANESE COMPANY

Tokyo KYODO in English 0344 GMT 6 Sep 79 OW

[Text] Tokyo, 6 Sep KYODO—Nippon Telegraph and Telephone Public Corporation has succeeded in testing a long-distance non-relay optical communication system which can transmit enormous information through minutely thin optical fiber cable.

The corporation's Musashino telecommunication laboratory said Thursday the optical communication test succeeded over a distance of 30 kilometers with transmission capacity of 800 megabits per second, equivalent to 10,000 telephone circuits, for the first time in the world.

Last March, the corporation succeeded in a similar test over a distance of 53 kilometers with transmission capacity of 100 megabits per second.

The corporation said the success has proven the feasibility of the optical communication system able to transmit the information of a 30-volume encyclopedia in only a tenth of a second.

The optical communication system is suited for Community Antenna Television (CATV), picture communication and data communication.

The success was attributed to a newly developed 1.3-micron-wavelength "indium-gallium-arsenic-phosphorus" laser diode as a light emitter capable of consecutive oscillation under normal temperatures and a newly developed optical fiber cable with less transmission loss.

The corporation plans to put the optical communication system into practical use while enhancing the transmission capacity of the system.

CSO: 5500

## NEW CARDIOLOGICAL DEVICE DESCRIBED

Sofia ELEKTROPROMISHLENOST I PRIBOROSTROENIE in Bulgarian No 3, 1979 p 111

[Article: "'Telecard' Apparatus"]

[Text] The "Telecard" transceiver is intended to transmit and receive by telephone or through the use of a radio set the electric signals of a patient's heart (EKG) to a specialized center for expert cardiological advice.

The basic function of the "Telecard" transmitter is to convert heart bioelectric signals into an FM signal of audio frequency range. It consists of a bioamplifier, frequency modulator and low-frequency amplifier.

A signal sent by a "Telecard" transmitter via telephone line, radio link or from a tape recorder on which a recording has previously been made can be fed into the input of the "Telecard" receiver.

General technical characteristics of the transceiver in an amplitude range of the input EKG signal from 0.05 to 5 V:

Nonuniformity of amplitude-frequency response characteristic (0.2÷100) Hz	3 V
Time constant	1.2 sec
Transmission factor	0.6
Total level of noise and interference introduced into transmitter input during normal telephone communication	50 V
Nonlinearity of amplitude characteristic	+5%
Preliminary switching time	1 sec



**Supply voltage:**

of transmitter	12 V d-c from storage battery;
of receiver	220 V, 50 Hz, or 18 V d-c from storage battery

**Dimensions:** 239 x 150 x 84 mm, same for transmitter and receiver;

**Mass:**

of transmitter	1.100 kg
of receiver	0.900 kg.

**Technical characteristics of transmitter:**

Carrier frequency	1500±100 Hz
Input resistance	4.5 MΩ
Coefficient of coherent interference suppression	60 V
Relative error of calibrating signal	1 V, 2.0%
Maximum deviation	±300 Hz.

The "Telecard" apparatus was developed by personnel of the Central Biophysics Laboratory of the Bulgarian Academy of Sciences, headed by Senior Science Associate and Doctor of Medical Sciences G. Georgiev. It was introduced into production by "Progress" TsUV [expansion unknown; possibly Central Applications Administration]. Producer: "Belasitsa" Plant in the city of Petrich.

6464

CSO: 2202

FORMOSA TO EXPAND ITS COMMUNICATIONS NETWORK

Buenos Aires LA OPINION in Spanish 21 Jul 79 p 6

[Text] The Formosa Province executive authority and the directors of ENTEL [National Telecommunications Enterprise] are planning new projects for the purpose of consolidating the local infrastructure in the field of communications.

These joint actions are to combine with the completion in the near future of the microwave network connecting Resistencia, Formosa and Clorinda, a project assumed by the province when it was impossible for ENTEL to undertake it. The new plan includes that effort as well as enlarging the capacity of the Formosa central exchange to include 2,000 urban lines in operation as well as 3,000 being installed, with an ultimate goal of 10,000 lines.

Also included is the task of setting up a modern police communications net, part of which can be used for regular communications as a means of improving telephone communications throughout the province.

Other specific improvements are the installation of automatic centers in Ibarreta and Las Lomitas, two important settlements in eastern Formosa where public telephones are planned for installation also.

The Eastern Regional Center of ENTEL announced that as of zero hour today, numbers will change in the "Carlos Tejedor" exchange of Mar del Plata.

This exchange is part of the Mar del Plata area and is characterized by "79" followed by 3 digits.

The change consists in insertion of a zero after the "79," that is, present subscribers from 79-000 to 79-999 become 79-0000 to 79-0999. For example the present number 79-011 becomes 79-0011 as of today.

11,989  
CSO:5500

## ARGENTINA

### MARGINAL ENTEL OFFICES TO PASS TO PRIVATE SECTOR

Buenos Aires CLARIN in Spanish 21 Jul 79 p 11

[Text] The head of the Secretariat of Communications (SECOM) announced yesterday that ENTEL, the National Telecommunications Enterprise, is in "a phase of logistical decentralization, to be followed in 1980 by decentralization in accounting," and indicated that marginal ENTEL operations are passing to the private sector, "now that we have set up about nine private firms which will handle all the aspects of building and maintenance." Also Brig Gen Eduardo Oscar Cerrado stated that in the near future "a new central exchange will be set up through the method of putting the contractor in charge of construction and installation of equipment."

According to the press release made public by SECOM yesterday, the official stated in his report that with regard to logistical decentralization, already "operations are under way through the creation of 5 regions encompassing the nation which have broad decisionmaking powers," adding that in a second phase regional firms will be created which may be state enterprises, legal corporations with a majority government participation or even corporations with minority government participation, and which will take into consideration the nature of the provinces and possibilities for private enterprise."

Regarding private participation, Gen Corrado stated that it will be effective when the projects let to bid are profitable. He added, "If they are not, if we do not make clear that a profit can be made, no matter how much we try to get private capital involved, it will not be available."

### Radio Broadcasting Law

The official also discussed the topic of the Radio Broadcasting Law, according to the SECOM statement, saying, "On the basis of a plan setting goals, policies and timeframes produced by the Military Government, the Secretariat of Public Information (SIP) has developed a draft proposal." He explained that the document has been studied and reviewed in some aspects by national and even provincial agencies, and at present all this information and feedback is being collated. Later this year the Law will be made effective as a regulation controlling broadcasting in Argentina. In conclusion the official stated that "clearly the direct responsibility for this important matter lies with SIP, and SECOM is cooperating because under its jurisdiction is the Official Broadcasting Service composed of LRA and affiliates in the interior."

11,989  
CSO: 5500

BRIEFS

TELEPHONE SERVICE--Through a decree the national executive office has drawn up a new listing of priorities for requests for telephone service. The decree's number is 1979-1032. It aims to streamline, within ENTEL's limitations, the provision of service to those who need it for special reasons and to systematize the existing priorities in such a way as to give preference to requests which have more merit in terms of public interest. As a result the requests of the following kinds will have preference: changes of address, requests made to ENTEL over 20 years ago, hospitals and other centers for assistance, communications media and professional offices, guilds and professional associations, unions, sports and cultural organizations, and finally residences of families. The decree's second article gives priority to Public Administration, the Armed Forces, decentralized agencies and the judiciary. [Text] [Buenos Aires LA OPINION in Spanish 21 Jul 79 p 16] 11989

## GROUND-SATELLITE COMMUNICATIONS STATIONS NEAR HAVANA

### New Earth Station Installed

Havana GRANMA in Spanish 13 Aug 79 p 1

[Article by Jesus Mena: "Final Tests of the Earth Station Linked to the Intelsat System Installed In Cuba Successfully Completed"]

[Text] Ministry of Communications engineers and technicians installed a modern earth station of medium capacity linked to the Intelsat System in only 3 months. Final tests were made last Saturday during a visit to the installation made by Guillermo Garcia and Pedro Miret, both members of the party central committee political bureau.

Flavio Bravo, vice president of the Council of Ministers, Minister of Communications Pedro Guelmes, and Oscar Fernandez Mell, chairman of the People's Government Provincial Assembly in the City of Havana, all members of the central committee, were also present during the testing of equipment located a few meters from the "Caribe" earth station located in Jaruco, Havana Province.

This station, acquired to increase telecommunications services required for the Sixth Summit Conference of Nonaligned Countries, has one antenna 11 meters in diameter, a capacity for 24 telephone channels, a broad band channel for color television, one frequency modulated audio channel for the television signal, two channels for commentator programs, and two engineering channels for technical coordination services.

With the establishment of this station of Japanese technology, our country becomes the fourth in the world to reach the advantageous position of having the two telecommunications systems. Its new and complex technology, together with the "Caribe" Intersputnik Station which has been in our country since 1973, will guarantee a greater capacity in the establishment of communications during the event, in keeping with the incessant increase in news which will develop.



Contracting, installation and placing in operation of this equipment required a careful and serious effort by the workers of MINCOM [Ministry of Communications], who managed to accomplish the installation of this complex system 9 months ahead of the scheduled date (the accomplishment of this work normally requires no less than 1 year), which is an unprecedented achievement, according to Engineer Salvador Gutierrez, director of telecommunications of the aforementioned ministry.

Gutierrez also reported that he already has the notification that Cuba already complies with the specifications established by the Intelsat organization to qualify as a user of the satellite, which insures the use of this new medium for the Sixth Summit.

He added: "With this, the goal established of reaching that phase on 15 August, date on which the documents accepting the station will be signed with the supplying firm, is attained ahead of time."



In the foreground may be seen the medium-capacity earth station recently acquired by our country and linked to the "Intelsat" System. In the background may be seen the antenna of the "Caribe" earth station of the "Intersputnik" System. Both will play an important function in communications transmission during the Sixth Summit Conference.

## Japanese Communications Equipment

Havana TRABAJADORES in Spanish 16 Aug 77 p 1

[Article by Graciela Arbolay: "Cuba Joins the Intelsat Satellite Telecommunications System"]

[Text] The integration of Cuba into the organization of the Intelsat satellite telecommunications system was accomplished yesterday in the Meeting Hall of the Caribe Land Station of the Ministry of Communications located in Jaruco, Havana Province.

The signing of the official document on the new earth station of Japanese technology with the supplying company, was presided over by Pedro Guelmes, member of the party central committee and minister of communications.

Signing the document for the Cuban side were Engineer Salvador Gutierrez, director of communications of the Ministry of Communications, and Jorge Madan, director of Maquimport. Japanese representatives Masaru Ganapi, director of the Latin American Division of Nipron Electric Company (NEC), Ryobel Kikuro, director general of the Telecommunications System Department of C. ITOH, and Shoshiro Yoskinari, representative of the C. ITOH firm in Havana, signed for the Japanese side.

With the establishment of this modern earth station, the cost of which is 1.2 million pesos, our country is the fourth in the world to reach the advantageous position of having the two telecommunications systems: Intersputnik and Intelsat. At this time, the Soviet Union, the United States and Algeria already have them.

In the initial phase of the use of this system of new and complex technology, our country will establish links with three European countries: France, Italy and Spain; in Latin American with Mexico and Venezuela, and in Africa, with Angola, Ethiopia and Mozambique. Temporarily, during the holding of the Sixth Summit Conference of Nonaligned Countries, the earth station will maintain communications with all member countries of the movement.

The station acquired by Cuba from the Japanese firm Nipron Electric Company Ltd. to increase the telecommunications required by the Sixth Summit Conference, has an antenna 11 meters in diameter, a capacity of 24 telephone channels, one broadband channel for color television, one frequency modulated audio channel, two channels for commentator programs and two engineering channels for technical coordination services.



The modern earth station is of Japanese technology and the total cost is 1.2 million pesos.

#### Additional Description of Equipment

Havana JUVENTUD TECNICA in Spanish Apr 79 pp 38-43

[Article by Ruben Gonzalez del Pino: "Instantly"]

[Text] In Cuba we have an earth station for transmission and reception in the Intersputnik system, an indispensable part of a new means of communications which opens great, immense prospects for the man of our times.

If someone had told us before the era of the space age that sitting in front of the television set in our home we would see a transmission originated in a far-off country an instant after it was made, surely there would have been an incredulous smile.

However, Cuba today is part of the international Intersputnik communications system, which not only guarantees that we see the television signal but is also capable of providing us with very fast and efficient telephone communications with many parts of the world.

It is precisely the "Caribe" earth station which is the link uniting the work of the satellites with the installations which reach the most remote corners of our country. There, a homogeneous mass of young people work hard to satisfy the growing cultural, political and economic demands of the new society.

Before beginning the tour through the station, it is necessary that the reader familiarize himself a little with a group of important elements which show the manner in which communications are established.

The traditional methods of microwave signals transmission, already very much in use, require the use of repeater equipment every so often, depending on the distance which separates the points which are communicating. This is a mandatory requirement because the transmitting and receiving antennas must be able to "see" each other, since signals are propagated in straight lines and any obstacle between the antennas will have a negative effect on them. Obviously, the reason for the existence of signal repeaters is the curvature of the earth.

The greater the distance to be covered, the greater the number of repeaters required and the greater the cost of the installation.

The use of buried or submarine cables and air links came to solve the problem but posed new restrictions: communications would have to be established point-to-point. Moreover, it was not economical for a country such as ours, for example, to have to install infinite wires to a large number of countries with which it had to communicate.

It was therefore established that users, among whom there was no direct line, would communicate through a relay station that did have lines with both. An obvious example of this problem is the great number of communications which are established, depending on the availability of lines possessed by relay countries such as Spain, the United States and so forth.

## A System Which Revolutionized Communications

Space communications, although they do not imply the complete disappearance of traditional methods of transmission and reception of signals, have many advantages: the satellite is a repeater but an active and only repeater between the communicating points. It can be considered the most effective means of communication, not only because of the quality of transmissions but also because of the possibilities of linking several points at once.

It is to be supposed that the above is due to the fact that from the height occupied by the satellite in its orbit, it sees many points of the earth's surface with its antennas and it is possible to establish a link. In order for this to be accomplished, it is necessary that each of the points selected have an earth station with equipment capable of receiving the signals from the satellite so that it may send them to the normal communications installations. These stations also have the equipment needed for transmitting, which functions in a reverse manner with respect to reception.

What is the "Caribe" Like?

The "Caribe" earth station has several rooms which perform their work in coordination and unison, which you will learn in logical order.

First, the system which our country uses works with artificial earth satellites (SAT) with an elliptical orbit, which means they travel around the earth in a path which much resembles an ellipse. They are of the subgeosynchronous type because they make two turns around the earth every 24 hours, of which only one can be used by the Cuban station.

Of the 12 hours of that period, communications may only be established during six, which means that for work during the entire day it would be necessary to use four satellites.

The first section we shall describe has to do with these characteristics, the way in which each satellite is maintained in focus during its period of use.

The tracking room has the equipment for activating the movement of the antenna in its task of tracking the SAT.

In the middle of the room we find a command and control console, where the positions of the antenna are established through mechanisms which activate the high and low-speed motors linked to its movement.

Tracking can be done in several ways: manually, a method least used, in which the operator uses servocontrols to indicate what the movement of the antenna should be to remain beamed on the SAT; automatic tracking or programmed and automatic correction of the program, in which



programmable machinery for specific uses intervenes directly to adjust the controls to a satellite flight program sent from the Soviet Union. In short, through these means of tracking, the antenna remains constantly beamed on the SAT it is using during that period.

After visiting this section, it is time to speak of the part of "Caribe" where the route of communications from the satellite begin. The receiver room links the 4 GHz signal from space to the station. With equipment of very advanced technology, the link is completed, which because of its special characteristics is worthy of mention due to the great relative difference between the power of the incoming signal and that which can be developed by the station, depending on its size and complexity.

These pieces of equipment, called "Parametric Amplifiers," are capable of amplifying the extremely weak signal coming to earth without amplifying the strong noise which accompanies it as a result of the distance it has to travel.

A second step within this room is that of the step-down converters, which transform the super high frequency of the incoming signal to 70 MHz.

The work in this room may perhaps be compared to a normal superheterodyne system used in many radio receivers where parametric amplifiers would play the role of the incoming radiofrequency amplifiers, which amplify the complete band, and the stepdown converters would be the converters of high frequency to intermediate frequency.

Returning to the logical order, let us once more follow the path of communications. After they leave the receiving room, the telephone and television signals transmitted by the Intersputnik system go to specialized rooms in each branch in the form of an intermediate frequency. The television room receives the 70 MHz - frequency modulated signal throughout the entire basic television band, which includes one video channel complete with its sound, and a radio broadcast signal. Here the signal is demodulated by specialized equipment, obtaining each of the channels separately. The video and sound signals are sent to the separation and mixing consoles and the other channel to the radio broadcasting console.

Video goes through a separation process for extracting the sound part so that it may be used for regular television transmissions where the video is on one frequency and audio on another.

On arriving at this phase, the station may already send two signals to the ICRT [Cuban Institute of Radio and Television]: video and audio, which are transmitted to our homes after they go through a certain process to adapt the standard to that used in our country.

In case it is desired to transmit programs originating in our country, the process to be followed is the reverse, with the only difference being that the two signals coming from the ICRT are mixed in the separation and mixing console from where this single video signal with incorporated audio passes on to the modulator and finally goes to the transmitter.

Work in the telephone room--the main point in the life of the earth station takes place in a process similar to that which takes place in the television room, but with one substantial difference: communications here must be duplex, which means that transmissions and receptions are accomplished at the same time because speaking and listening is done in successive periods.

The room is divided into two basic parts, a piece of conventional multiplex equipment which links the station with the system installed by the Ministry of Communications, and another piece of land multiplex equipment which links the station with the satellite. In this section of the "Caribe" station, two very interesting phenomena should be pointed out which give new vigor to telephone communications: echo suppression and multiple access.

An echo is a characteristic inherent in all telephone communications, since part of the transmitted signal is reflected, returning to its point of origin a short time after it is transmitted. Obviously, in short-range communications, the distance going and coming which the signal has to travel is negligible with respect to the speed of light--300,000 kilometers per second--and as a result, the echo is imperceptible.

In the case of satellite communications, the distance to be travelled--160,000 kilometers--is an appreciable factor and for that reason the station is equipped with echo suppression equipment, which acts efficiently channel by channel.

Multiple access, as another phenomenon, is a highly valued quality in this modern communications system, which is already considered a revolution in this field. This is easily explained, knowing that with the use of the satellite the link does not have to be point-to-point as in the other systems now being used, but that all the user countries have access to communications with the rest of the countries at the same time. In short, this has been a significant achievement of satellite communications.

The final part left to be visited in the earth station are the transmitters. They have step-up transformers which change the 70MHz of signal coming to them to 6,000 MHz (6GHz) for transmission to the satellite. Subsequently, there is a preamplification in the progressive wave tube from which the signal is delivered with the necessary frequency to the tubes in the final stage which increase the power for transmission.

It only remains to be said that this important service provided by the "Caribe" earth station is accomplished so as to obtain an accelerated development for our country in the field of communications and to place ourselves on a higher level which will satisfy the needs of the new society.

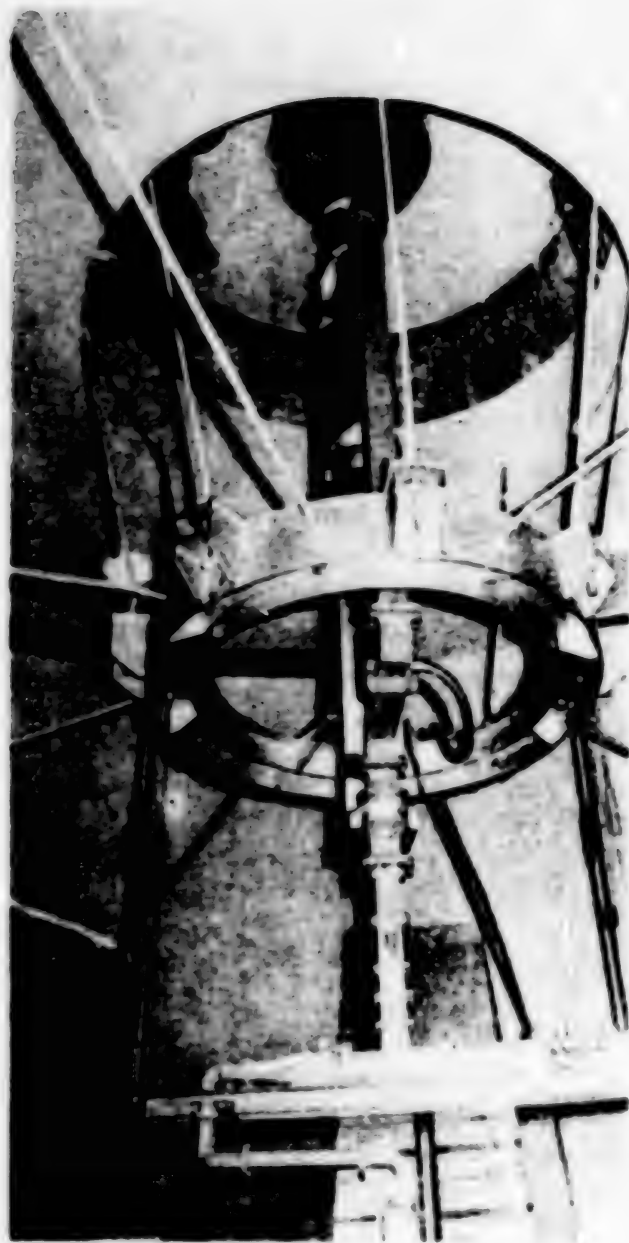
Now you all know that while you enjoy programs originating in a distant country, or when you communicate through the Intersputnik system, there in the "Caribe" earth station, a group of young people, who know the technology which is the direct product of space research, are working hard to provide you with better service.

We are grateful for the gracious cooperation of Comrade Elio Gonzalez, who provided us with the basic information which served as the basis for the preparation of this article.



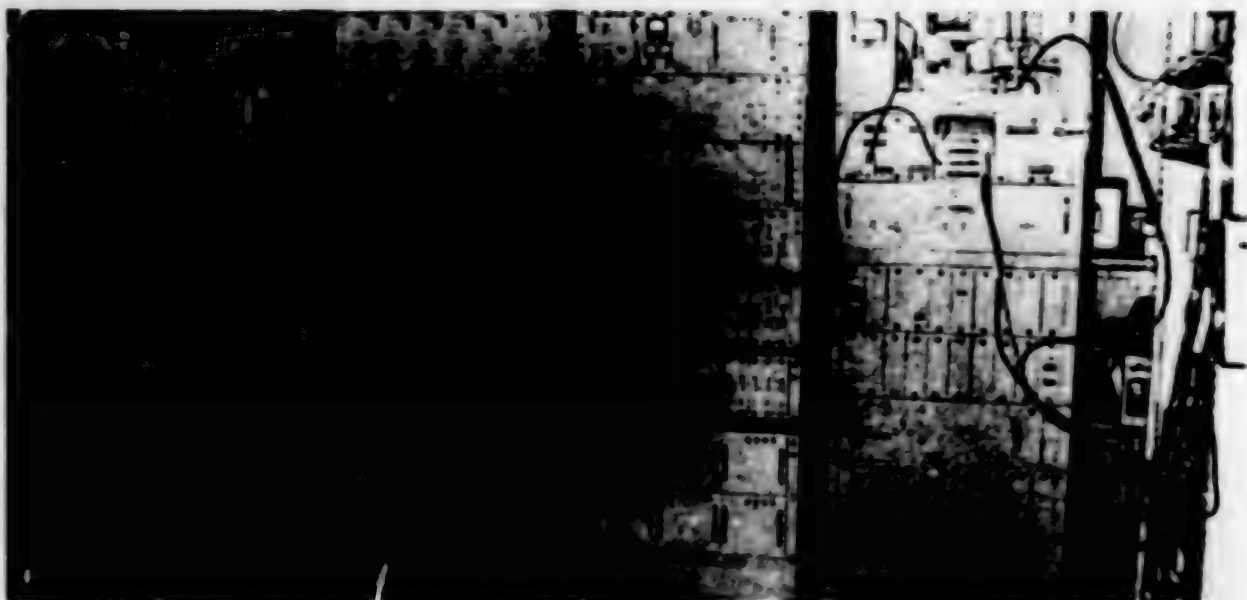


Each working room in the "Caribe" station shows the development of present technology.









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**SOUTH LEBANON CHRISTIAN RADIO STATION**

Jerusalem Domestic Service in English 1200 GMT 22 Aug 79 TA

[Text] We have news of a rival radio station: It is being set up by Major Haddad and his fellow Christians in southern Lebanon. For that story—Shim'on Ayyalon:

[Begin recording] If all goes according to plan the Voice of Free Lebanon will be on the air on medium wave in less than a month. Sources in Israel say the sponsors of this project are concerned American and European church officials. The transmitters are currently in Ashdod Port and will be transported to Lebanon this week. They should give the station enough power so its Arabic and English language broadcasts will be heard in Egypt, Syria, Iran and Iraq and of course, all countries in between. The broadcast format as currently projected was described as solid, quiet music with gentle pop, interspersed with news broadcasts and special programs for the UN soldiers in the region; programs which would broadcast to them messages from their families in their home countries, something along the lines of the BBC's family favorites.

Foreign volunteers are currently teaching a number of young Christian Arabs the intricacies of radio technical operations and also the various journalistic angles involved. The purpose of the radio station will be to give a balanced picture to the world of what is happening in southern Lebanon, that's the salient held by Christian and Muslim Arab forces which flanks the northern Israeli border. There will be no propaganda, but the Lebanese army major in control of the salient, Sa'd Haddad, will have a daily talk show slotted into the timetable.

Haddad is aware that the radio station may well be a target for Palestinian terror attacks and possible Syrian air or artillery bombardments, but arrangements have been made so that if the bombardments happen while the shows are on the air, outside microphones will carry the sound of the shell bursts to the transmitters and they will serve as a background effect--a sort of Levantin Tchaikovsky--at least until there is a direct hit.

If the radio project works out, the southern Lebanese broadcasts will expand to cover T.V. shows. Some funds have already been found to foot the bill for a color television transmitter and studio. Church masses throughout the world have already been videotaped for broadcasts and there are plans to take video recording crews to the countries of the UN contingents in the region. There, families of soldiers serving out here will say hello, send regards and wave to the cameras in special programs planned for the UN troops.  
[End recording]

CSO: 4820

# IVORIAN TELECOMMUNICATIONS COMPANY DISCUSSES PLANS

Abidjan FRATERNITE MATIN in French 10 Sep 79 p 8 AB

[Excerpts] The 20th session of the Administrative Council of INTELCI [International Telecommunications of the Ivory Coast] was held at the Hotel Haraattan in Bouake. Mr Germain Tano presided over the meeting and among those present were M. R. Kouassi Apete, director general of INTELCI; the managing director of France Cable Radio, Mr Salosse; and the administrators of INTELCI. The prefect of Bouake and the deputy mayor were invited to the opening ceremony.

After welcoming the participants, the president of the administrative council, Mr Tano Germain, talked about the firm which will soon celebrate its 10th anniversary.

Mr Tano said "By its importance, the 20th council session, which is taking place within the context of the 1976-1980 plan, constitutes in my opinion a development in telecommunications much desired in order to solve the problems posed by dialog between man and machine."

It is no longer sufficient just to telephone today. It is also necessary to be able to transmit data, interconnect computers and set up dialog between them for scientific research and in order to solve the problems of businessmen.

That is why the minister for posts and telecommunications, Mr Kone Bangaly, and the government spare no effort in providing the nation with an efficient telephone network. With this goal in mind the international telecommunications firm of the Ivory Coast is setting up a second aerial antenna at Akakro which will be put into use in July 1980. Other projects include:

- the laying of an underwater cable between Abidjan-Lagos
- the acquiring of 60 satellite channels
- the financial assistance of INTELCI to OPT [expansion unknown] for the development and modernization of the national network.

The budget for the 1979-80 plan is as follows: Operation revenues: 4,795 billion [CFA]; expenses for current budget: 3,486 billion [CFA].

CSO: 5500



## **SOUTH AFRICA**

### **BRIEFS**

**COMMUNICATIONS CIRCUITS**--South Africa's dependence on satellite telephone and television circuits is increasing--in line with a worldwide increase of about 25 percent in satellite use last year for countries in the Indian Ocean region. A Post Office spokesman said in Pretoria this week that South Africa was continually increasing the number of satellite circuits available to it and was building a third antenna station at Hartbeeshoek. "South Africa now has 278 satellite circuits for telephones and 274 submarine cable circuits," he said. Demand last year for worldwide international telecommunications via satellite also increased in the Atlantic region (25 percent), and the Pacific region (31 percent). International satellite television jumped by 53,3 percent to over 11 600 channel hours, with the biggest ever satellite TV event being the 1978 World Cup soccer championships. The match had an estimated viewing audience of 1 000-million. [Text] [Johannesburg THE STAR in English 15 Aug 79 p 6]

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UDC 796.092.1[100]:654

## OLYMPIC GAMES--AUTOMATIC TELEPHONE EXCHANGES

Moscow GORODSKOYE KHOZYAYSTVO MOSKVI in Russian No 7, 1979 pp 14-15

[Article by V. F. Vasil'yev, chief of the Moscow Telephone System:  
"Reliable Communications"]

[Text] Reliable telephone communications are one of the main prerequisites for success in holding major athletic competitions. Realizing this, our collective is actively preparing for holding the 1980 Olympic Games. The city telephone system has been entrusted with the function of buyer for the equipment and installation of special ATS [automatic telephone exchanges] for the Olympics. Some 15 new ATS are to be put into operation in order to ensure telephone communications for the sports complexes, press centers, television center, hotels, dormitories and other places accommodating the participants and guests of the 1980 Olympic Games. Five main exchanges with index numbers 201, 217, 444, 288 and 437 are located respectively in Vsevolozhskiy Lane, on Zvezdnyy Boulevard, Veresayeva Street, Samarskiy Lane and the Olympic Village on Michurinskiy Prospekt. Their total capacity is 50,000 numbers. This year all these exchanges should be ready for operation. The equipment for them is being supplied by the Leningrad Krasnaya Zarya Plant and firms of the CSSR and GDR.

The telephone service for the Olympics provides for many innovations. All the sports structures, the Olympic Village, the radio-television complex and the press centers are in addition connected with each other by a system with five-digit numbering. This separate system will have no outlet to the city. Furthermore, we are providing all the Olympic facilities with direct city telephones from the nearest regional ATS. A broad network of automatic telephones and telephone booth centers is provided at all the sports structures.

While the Olympic Games are in progress we will have to ensure communications with the mobile "subscribers" and facilities to which access is difficult. For them we are designing ultrashort-wave radio-telephone communications based on the modernized Altay system.

The technical operations management at each sports structure for the 1980 Olympic Games was entrusted to the responsible representative of the MGTS [Moscow City Telephone Network]. Under its jurisdiction will be a brigade to service the telephone communications mechanisms that is staffed with skilled specialists who will also have undergone special training by that time. The modernized central control room of the MGTS will monitor the quality of the work of the entire telephone system.

MGTS telephone centers have singled out the best specialists to ensure efficient operation of the subscribers' equipment in the places of residence of the national sports delegations, officials, guests, journalists and tourists attending the 22d Olympic Games in 1980. They will be assigned to certain facilities. Special groups will take on all the functions for maintenance of the pay telephone services. Communications men engaged in the direct handling of the games will be provided with special Olympic uniforms.

By the beginning of the 22d Olympic Games, an "Olympiada-80" telephone book will be published in Russian, English and French. In it, each guest of the world athletic forum will find information on the services offered by the USSR Ministry of Communications during the period of the 1980 Olympics, as well as the telephone numbers of all the enterprises and organizations participating in the holding of the Games.

Separate Olympic information service will also serve foreign guests and participants in the Olympic Games. It will be able to issue all the necessary information in one of four languages--English, French, Spanish and German. In addition, the information pay phone system will be considerably expanded. With its help the guests in the capital will obtain information on how to drive through Moscow, the schedule of railroad, river and motor vehicle transport, the store hours, etc.

In a word, by the beginning of the 22d Olympic Games, a great deal of preliminary work will have been done at MGTS in accordance with various plans. After all, by 1980 we should have all the structures supplied with equipment--Olympic facilities, regional press centers, hotels, camping grounds and other places where tourists will stay, and should have high-quality preparation of all the equipment of the existing telephone system. After the Olympic Games all the automatic telephone exchanges that have been built will naturally be included in the city communications. Due to this, thousands of additional telephones will be installed in the apartments of Moscow citizens.

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[1050-12151]

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UDC 796.092.1[100]:681.11

## NEW TIME TELLING SYSTEM DEVELOPED FOR OLYMPICS

Moscow GORODSKOYE KHOZYAYSTVO MOSKVY in Russian No 7, 1979 pp 15-16

[Article by B. Radchenko: "On Moscow Time"]

[Text] "Moscow speaking! We are transmitting precise time signals. The beginning of the sixth signal corresponds to 1200 hours Moscow time..." the director of the All-Union Radio announces daily. All of us mechanically glance at the clock faces and, if necessary, adjust their hands correctly. These signals are heard from loudspeakers and radios not only at noon, but also at the start of each hour throughout the day.

The rapid development of various fields of science, and especially radio-electronics, telemechanics and information equipment, has now laid the basis for designing all-purpose electric clock systems that reliably and accurately supply standardized readings of the time to residences and industrial enterprises, cultural institutions and administrative buildings, settlements and cities, rayons and oblasts, and in the future--the entire country as a whole.

The centralized system of standardized time in the form of a series of clocks intercoordinated by a network of communications channels, permitting automatic coordination of the readings of all the time instruments included in this system was worked out at the beginning of the 1970's by scientists of the All-Union Scientific Research Institute of Metrology imeni D. I. Mendeleev (VNIIM) in Leningrad. Here at the Pulkovskiy meridian in one of the halls of the old building are special reference clocks--the city's primary sources of accurate time. Daily they issue special correctional signals in the form of pulses to the central communication center for city radio relay. Equipment for the institute of metrology is also installed there. Its basis is a generator that transforms signals into pulses with a frequency of 12.8 kHz. In turn, the signals are broadcast throughout the city, every place where there are radio points (and they are everywhere). Therefore, there is no need for any special leads to the street clocks--the radio network "commands" them.

The Scientific Research Institute of the Clock Industry of the Ministry of Instrument Making, Automation Equipment and Control Systems has now worked out a specific system for outdoor clock distribution in Moscow. Beautiful bright street clocks with modern shapes and dimensions, designed in good taste, have already become an integral part of the landscape of the capital's Leninskiy Rayon. These electronic time instruments, manufactured at the Leningrad Khronotron Plant, take commands from a central control panel, where a special clock center has been installed that sends out pulses every hour correcting the accuracy of the running of the clocks of the entire rayon.

By the end of the 10th Five-Year Plan, throughout Moscow, including the microrayons of the new construction projects, up to 2,000 new street clocks are to be installed, with about 200 of the time instruments for public use being digital. The digital time instrument can already be seen on the facade of the Standarty Pavilion of the Exhibition of USSR National Economic Achievements. The combined indicator of these clocks changes its role regularly--every 10 seconds, after giving out information on the time, numbers flash out on the screen reporting the temperature of the air at the given point in the city.

The lighted digital information board is only the external part of the information-measuring complex. It is connected with a special control board for the Avrora electronic unit. The unit, the size of a household refrigerator, is installed outside the building and has two blocks--time and temperature. The information arriving at it is decoded and transmitted to the digital information board. Moreover, the deviation of the digital clocks from the accurate time is not over 1.5 seconds a day, and of the temperature--not over half a degree within a range from  $-50^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$ .

Right now the local Olimpiada-80 chronometric system, designated to record the time at the Olympic radio-television complex and designed at the Scientific Research Institute of the Clock Industry, is undergoing plant testing. Corrected from the state time standard, it will supply information on the current time in hours, minutes and seconds for the studios, editorial offices and other facilities of the unique building being built at Ostankino.

When we arrived at the test for the system with Viktor Aleksandrovich Shvatov, candidate of technical sciences, a bell was heard in the hall.

"In a minute there will be a clock correction," Viktor Aleksandrovich warned me, and invited me into the next room, where the timekeepers are located--a quartz chronometer and other primary equipment for the system.

The quartz chronometer bears not even the remotest similarity to ordinary clocks--it is, rather, an ordinary box, filled with all kinds of electronic subtleties--transistors, integrating circuits.... On the boards of the instruments are digital and dial-needle indicators of the current time--hours, minutes and seconds. There are about two dozen control clocks on the wall.



The time is 1559 hours. The wall clocks have begun to behave somewhat strangely: the second hand of some has suddenly frozen in place, and of others has quickly run ahead and stopped at the number "12." Signals of the precise time are delivered by radio and at the sixth signal the indicators of the digital and analog clocks have come alive and run ahead all together. This special device, called the correction unit, has taken from the radio relay system the time correction signal transmitted from the Main Metrological Center. In hundredths of a second the signal has "run up to" the central radio assembly and from there to the testing bench.

The Olimpiada-80 chronometric system is quite economical with respect to its structure. It requires no special communication lines. Mainly standard time instruments, series-produced by the industry, will be used to put it into practical operation. The advantage of this system is the high degree of reliability and accuracy. Operation of control groups of clocks showed that the apparatus that will be installed in the Olympic radio-television complex building will ensure continuous operation for up to 2,500 secondary time instruments.

In a year of operation, the system has been keeping accurate time with an error of no more than  $\pm 2$  seconds. A reserve feed is also provided, which makes it possible to maintain the time base for several days if there is no electrical power.

Clocks with standard time are changing their face. Their rhythm is flowing together with the clear-cut rhythm of the standard time of the Soviet Union, which is maintained, as an extremely great asset, in the State Service for Time and Frequency of the Main Metrological Center of USSR Gosstandart. In the near future super-precise instruments of the centralized system of standard time will control the clocks not only of all the cities in the nation, but also clocks on trains, planes, ships and in motor vehicles. With the development of microelectronics, when particularly miniature receivers and power elements will be designed, the watches that we wear on our wrists or carry in our pockets will also begin to show standard, absolutely accurate time. They will comply with the commands of the state's main clocks.

Approximate, crudely calculated, inaccurately indicated time cannot satisfy today's society at all. The clocks of our times should be not only available and reliable, but also as accurate as possible, for they afford the priceless possibility of efficiently using one of the greatest assets in life--the most unquestionable of all the riches that man possesses--Time.

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[1050-12151]

CS0: 5500

## BRIEFS

**NEW ATHENS TELEX CENTER**--The new Athens telex centre capable of handling 4,500 subscribers was inaugurated last week at the OTE building in the presence of the Undersecretary of Communications Mr. Moutsios, and the Governor and Deputy Governor of OTE, Mr. Sekeris and Mr. Moustakas. The centre is reported as being one of the largest and most modern in the world. A few days previously, the operation of three other similar centres began in Piraeus (with 2,000 connections), Thessaloniki (with 700), and Patras (with 500 connections). Also delivered simultaneously were 2,500 electronic telex machines which will be used to satisfy the 2,000 pending applications for telex installation. The Athens Centre covers 90 percent of the traffic of the country which is now linked through the telex system with 42 countries and with 53 foreign centres directly. [Text] [Athens BUSINESS & FINANCE in English 4 Aug 79 p 2]

**OTE THREE YEAR PLANS**--In order to improve its telecommunications facilities and to eliminate its dependence on foreign countries, and also with the aim of increasing Greece's importance as a communications center in the Eastern Mediterranean, OTE, the Greek telecommunications organisation last week outlined the major projects of its development programme to be carried out within the next 3 years. These projects include the establishing of another satellite station next to the existing one in Thermopylae (to be ready by 1981) and the construction of a new station in the Nemea area (to be ready by 1983 and costing some \$300 million). This latter will have three substations of which one will operate only within the European system while the other two will operate internationally. With reference to the ELVYL plant (the proposed state telecommunications equipment manufacturing facility, see B&F No. 12), major specifications of what is required have already been established and it is expected that the Ministry of Communications will soon call for bids for the assignment of the project. As regards the other major projects in OTE's programme involving the establishing of several new centres, these include the proposed small electronic telephone centre of 2,000 circuits, a larger centre of 2,000 circuits, also and the extension of the existing 900 circuits centre. OTE's immediate target, which is included in its projects for the next 3 years, is also to link Greece (by undersea cables) with France, Cyprus, Syria, Italy and Spain. Negotiations are also underway for a connection between Greece and Egypt. [Text] [Athens BUSINESS & FINANCE in English 11 Aug 79 p 3]

## PORTUGAL

### NEW REGULATIONS TO CONTROL RADIO, TELEVISION APPROVED

Lisbon DIARIO DE NOTICIAS in Portuguese 9 Jul 79 p 6

[Article by G.M.: "Seven New Laws for Radio and Television"]

[Text] The Assembly of the Republic, in plenary session, has just approved a series of seven draft bills (four sponsored by the PSD [Social Democratic Party] and three by the PS [Socialist Party]), which immediately came to be known as the "news package," although the bills deal quite specifically with just two important communications sectors: television and radio broadcasting. The four PSD bills pertain to use of the media during election campaign periods, the right of reply on radio and television, publication of unofficial communiques and the Television Law. The three PS bills concern the Television Law, the Radio Broadcasting Law, and the RDP [Portuguese Radio Broadcasting System] Statute. Of the seven bills, only the one concerning unofficial communiques won unanimous approval in the assembly. The other bills presented by the PSC received majority approval, with the PCP [Portuguese Communist Party] abstaining, except for the Television Law, which was approved only by the PS, the PSD and the independent Social Democrats. The rest of the assembly voted against it. The PS Television Law, was passed, with the PSD, CDS [Social Democratic Center Party] and UDP was the only abstaining party. The RDP Statute was passed, with the PSD and the CDS approving and the UDP abstaining.

The reader who did not attend the parliamentary debates is certainly asking: What are the laws? What do they say? What is their content? Hence we are presenting this summary, necessarily brief, in clarification.

### No Government Activities Publicized During Election Campaigns

Sponsored by Sa Carneiro and three former PSD deputies who are now independent Social Democrats (Magalhaes Mota, Barbosa de Melo and Cunha Leal), the bill on the use of the news media during election campaigns originated in the idea that "members of the government have much greater access to these media than any other citizen has, and this power derives in great part from their ability to create political news." However, according to

the bill's preamble: "The appearance of government members in the news media cannot be confused, or be permitted to be confused, with speeches they make during election campaign periods, particularly when representatives of other political forces are denied this right or when speeches by government representatives are not subject to the same limitations." This is basically what is established in the three short articles of the bill now passed, mainly in the first two articles: "From the date on which the candidates are announced, the national news media may not publish reports, pictorial or otherwise, of the movements of government members on national territory." Also: "During such periods, the news media must refrain from interviewing government members or printing their statements to the foreign press, except in cases of obvious national interest."

#### Right of Reply, Irrespective of Possible Legal Proceedings.

Regarding Bill 35/1, on the right of reply on radio and television, its first article states: "Any individual or collective entity, public body or one that is understood to be social may exercise this right when it feels it has been injured by any radio or television broadcast of direct affronts or verbal, audio or visual references to false or erroneous facts that might effect its reputation and good name or its basic rights." Such a reply "must be broadcast within 48 hours after receipt of the request to reply." Said reply may not contain "discourteous language, indecorous images or expressions or images that might entail civil or criminal liability." The right of reply is "irrespective of any possible criminal prosecution for the broadcast of a statement, sound or image considered offensive; it is also irrespective of the right to damages for injury." In the specific case of damages occurring by television, the latter may propose to the offended party that he exercise his right of reply in writing, for newspaper publication. If, however, the offended party does not accept said proposal, he must be allowed access to television. In either case, the expense must be borne by the latter. The individual responsible for commission of the offense may be censured by the Information Council, with initiation of disciplinary action.

#### Private Television Companies Subject to Parliamentary Authorization

The Television Law introduced by the PSD in Draft Bill No 167/1 (which has no specific connection with the RTP [Portuguese Radio-Television System]) is intended to regulate television broadcasting activities on national territory and to institute a specific system for said regulation. Excluded from this law are companies that have been established for closed-circuit television on national territory, although the broadcasts are transmitted by satellite or originate outside national territory. The law also determines that "television is a public service; it may not be the object of private ownership and is subject to government regulation under the terms of the law." Article 4 is of particular interest. Paragraph 3 establishes that "the government may create new public television enterprises and



reorganize the present public television system by decree law; possible licensing of private, cooperative or mixed enterprises may be authorized only by law of the Assembly of the Republic." With 38 articles, the bill covers, among others, such important items as: guaranteed pluralism; the right to air time for political parties; union, management and professional organizations; programming standards; prohibited programs; freedom of expression; right of reply; and the right to strike. In the event of a strike, the workers are obligated to perform the minimum services essential for the provision of this public service.

#### Obligatory Free Publication of Unofficial Communiques of 500 Words or Less

Draft Bill 119/1, regarding publication of unofficial communiques, first states that "divulgence and publication of these communiques, in which the government expresses its viewpoints, shall be restricted to exceptional cases, in order to avoid influencing public opinion through the systematic advertising of government positions and those of its trusted officials." Article 1 stresses that "daily news publications, news agencies (such as ANOP), the RTP and the RDP may refuse to publish such material if it is not submitted by the Office of the Prime Minister or if the text exceeds the fixed limit of 500 words. In cases where the limit is exceeded, the enterprises may present an abridged summary of the text. According to the new law, "the opposition parties," or those not represented in the government but holding seats in the Assembly of the Republic, have the right to air time or newspaper space equal to that of the government to respond to unofficial notes. When the government opts for full publication of notes that exceed the established limits, it must bear the burden of the cost of such publication in accordance with the rates in effect for published advertising. It is the responsibility of the Press Council in general and the news councils in particular to monitor the principle of nondiscrimination in the publication of said notes and responses to the latter.

#### Closing of Illegal Television Stations and Confiscation of Property

The first of the three PS draft bills approved by the Assembly of the Republic concerns television. As stated in its preamble, Bill No 197/1 is a "draft bill regarding television activity, exclusive of any standards relative to the specific entity that currently exercises this activity, i.e., Portuguese Radio-Television EP [Public Enterprise], standards that will be suitably established in its respective statute." In Article 2, the bill stresses that "television must be solely under state ownership"; it constitutes a "public service and should be subject to concession under terms to be defined by special law." As the socialists see it, "the exercise of television broadcasting should be subject to government supervision under terms to be regulated." The illegal exercise of television broadcasting activity will result in the closing of the station and confiscation of the property on the respective facilities; its directors will be subject to 2 to 8 years' imprisonment and a fine of 1,050 contos. The rest of the



draft bill is similar to the one presented by the PSD; the bills were handed down together for discussion in committee. That is to say, the two bills are similar with respect to guaranteed pluralism, the right to be aired and to respond, the right to strike and other equally important items.

#### Radio Broadcasting Open to Private Enterprise Under Special Conditions

Draft Bill No 219/1--the Radio Broadcasting Law--closely follows the preceding bill for television broadcasting, since the "similarity of circumstances and the activities to be regulated resulted in the similarity of the respective texts," as noted in the preamble. It adds that "some differences are dictated by the fact that, unlike television broadcasting" (according to the socialists), "radio broadcasting activity may also be exercised by private companies, and also because radio has been broadcasting longer than television." In effect, and unlike its bill regarding television, the PS draft bill for radio broadcasting establishes that public, private or mixed enterprises may be licensed under terms to be defined by special legislation," but the bill adds that "this licensing would not necessarily be guaranteed."

Radio broadcasting activity "would be subject to supervision by the government through a department designated for that purpose by the respective organic law." The purpose of such supervision would be to "guarantee the execution of aims enumerated in the law, within the standards or principles of international law" and under terms to be regulated.

In other respects, as mentioned in the preamble, this law closely follows the PS draft bill for television, in content and in expression.

#### Annulment of Government Measures Revoking RDP Statute

The last of the bills contained in the so-called "package," and now approved, is Bill No 236/1, which was also drafted by the PS. It is also the most recent of all the bills approved, and pertains specifically to the RDP Statute. In its presentation in the assembly and now, after its approval in full session, the PS very specifically has sought to cancel measures taken by the present Mota Pinto government regarding the RDP. After that administration revoked the statute previously in effect for the enterprise, by Decree Law No 274/76, of 12 April, it sought to "replace that statute with a handful of standards that conveyed a vast normative vacuum and at the same time concealed a radical retreat from the important achievements of the prior statute with respect to the independent and democratic existence of the enterprise," as it is stated in the preamble of the bill now approved. As innovations, the statute proposed by the PS presents the Radio Broadcasting Assembly, which is now designated as the Opinion Assembly and appears in a new form. The government appoints only the president and one voting member to the five-member administrative council, the rest are chosen by the Information Council for the RDP and the workers. Each of these two groups also designates a representative to the fiscal council, the third member of which is chosen by the government.

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